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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/810,523	03/19/2001	Masao Minobe	Q65488	6184
23373	7590	06/14/2005	EXAMINER	
SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037			NGUYEN, THONG Q	
			ART UNIT	PAPER NUMBER
			2872	

DATE MAILED: 06/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/810,523	<b>Applicant(s)</b> MINOBE ET AL.	
	<b>Examiner</b> Thong Q. Nguyen	<b>Art Unit</b> 2872	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 22 February 2005.
- 2a) ☐ This action is FINAL.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-33,36 and 37 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 3-5,14-17,32,33,36 and 37 is/are allowed.
- 6) ☒ Claim(s) 1,2,6-13 and 18-31 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Response to Amendment*

1. The present Office action is made in response to the amendment of March 24, 2005. It is noted that in the mentioned amendment, applicant has canceled claims 34-35 and 38-39. The remaining claims 1-33 and 36-37 are examined in this Office action.

### *Allowable Subject Matter*

2. The indicated allowability of claims is withdrawn in view of the newly discovered teaching provided in the U.S. Patent No. 5,684,626 to Gary, Greenberg. Rejections based on the newly cited reference(s) follow.

### *Claim Rejections - 35 USC § 112*

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1-2, 6-13 and 18-31 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

a) Claim 1 is rejected under 35 USC 112, second paragraph because it is unclear about the structure of the illuminating means, the table supporting a sample and the objective as claimed. ***In particular, it is unclear how the illuminating light beam is able to converge at a point in a space when the illuminating light passes through the sample. Applicant should note that the illuminating light is converged at a point in a space (see lines 2-3 of the claim) without passing through a sample. When a sample is placed in the illuminating***

***light path, the illuminating light incidents onto the sample and thus the illuminating light will not converge into the mentioned converged point in a space.*** In other words, the feature thereof "said illumination light... said converging point" recited on lines 8-9 make the claim indefinite because it is unclear about the structure of the illuminating means, the table supporting a sample and the objective as claimed.

b) The remaining claims are dependent upon the rejected base claim and thus inherit the deficiency thereof.

***Claim Rejections - 35 USC § 103***

5. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

6. Claims 1 and 6, as best as understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over Greenberg (U.S. Patent No. 5,305,139, of record) in view of Greenberg (U.S. Patent No. 5,684,626, of record).

Greenberg, Patent No. '139, discloses a microscope having an illuminating system. The device as described in columns 3-5 and 7-12 and shown in fig. 2 comprises an illuminating system for providing light which is converged onto a point in space, a stage for supporting a sample located between the illuminating system and the converged point, and an objective system disposed after the converging point for receiving light passing through the sample. It is noted that Greenberg does not disclose that the illuminating system comprises a single light source as claimed. However, the use of a single light source in place of plural

light sources is known to one skilled in the art as can be seen in the microscope provided by the same inventor, Greenberg, in his Patent No. '626. In particular, in the microscope described in the Patent No. '626, Greenberg discloses two embodiments in which one embodiment the illuminating system comprises a plurality of light sources (see columns 4-7 and figs. 4-7) and in other embodiment, the illuminating system comprises a single light source. See columns 8-9 and figs. 12-13. Thus, it would have been obvious to one skilled in the art at the time the invention was made to modify the microscope as provided by Greenberg in his Patent No. '139 by using a single light source as suggested by the system Greenberg in his Patent No. '626 for the purpose of reducing the number of light sources being used and for improving the continuous center aperturing illumination.

Regarding to the feature related to a single light source, it is noted that the illuminating system provided by Greenberg is a single light source. See columns 8-9 and fig. 12-13.

7. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Greenberg (U.S. Patent No. 5,305,139, of record) in view of Greenberg (U.S. Patent No. 5,684,626, of record) as applied to claim 1 above and further in view of Shimada et al (U.S. Patent No. 6,043,475, of record).

The microscope having an illuminating system as provided by Greenberg does not disclose that the movement of the objective lens for focusing with respect to the diffractive image plane and the sample. However, the movement of an

objective lens and the movement of a condenser lens with respect to an object to be illuminated and/or imaged as well as the diffracting image plane in a microscope is known to one skilled in the art as can be seen in the microscope provided by Shimada et al. See column 15 and fig. 14. Thus, it would have been obvious to one skilled in the art at the time the invention was made to modify the microscope provided by Greenberg by adjusting the position of the objective lens with respect to the object as suggested by Shimada et al for the purpose of adjustment the focusing of the objective lens.

8. Claims 7-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Greenberg (U.S. Patent No. 5,305,139, of record) in view of Greenberg (U.S. Patent No. 5,684,626, of record) as applied to claim 1 above and further in view of Ellis (of record).

The microscope having an illuminating system as provided by Greenberg discloses the use of polarization elements in the illuminating light path as well as in the observed light path. Greenberg does not clearly disclose that the polarization elements and the sample are able to rotate as claimed. However, the use of a microscope having polarization elements and an illuminating system for provided illuminating light to the polarization elements and then illuminating an object wherein the polarization elements and the object are rotated is known to one skilled in the art as can be seen in the microscope provided by Ellis. See columns 6-7. Thus, it would have been obvious to one skilled in the art at the time the invention was made to modify the microscope provided by Greenberg by rotating the polarization elements and the sample as suggested by Ellis for the

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purpose of varying the illumination and/or observation patterns and the different areas of the object to be illuminated/observed.

9. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Greenberg (U.S. Patent No. 5,305,139, of record) in view of Greenberg (U.S. Patent No. 5,684,626, of record) and Ellis as applied to claim 7 above, and further in view of Shimada et al.

The microscope having an illuminating system and rotatable polarization elements and sample as provided by Greenberg and Ellis does not disclose that the movement of the objective lens for focusing with respect to the diffractive image plane and the sample. However, the movement of an objective lens and the movement of a condenser lens with respect to an object to be illuminated and/or imaged as well as the diffracting image plane in a microscope is known to one skilled in the art as can be seen in the microscope provided by Shimada et al. See column 15 and fig. 14. Thus, it would have been obvious to one skilled in the art at the time the invention was made to modify the microscope provided by Greenberg and Ellis by adjusting the position of the objective lens with respect to the object as suggested by Shimada et al for the purpose of adjustment the focusing of the objective lens.

***Allowable Subject Matter***

10. Claims 3-5, 14-17, 32-33 and 36-37 allowed.

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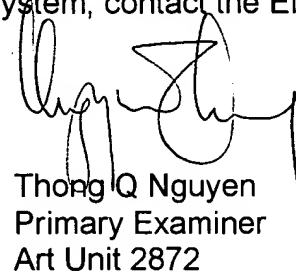
11. Claims 18-31 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

**Conclusion**

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thong Q. Nguyen whose telephone number is (571) 272-2316. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Drew A. Dunn can be reached on (571) 272-2312. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Thong Q Nguyen  
Primary Examiner  
Art Unit 2872

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